

Serial No. 10/759,015

**REMARKS**

Claims 1-20 are still pending.

Applicants would like to point out the following dictionary definition of the term "flap" take from The American Heritage® Dictionary of the English Language (4<sup>th</sup> ed., © 2004 and published by Houghton Mifflin Company): "A variable control surface on the trailing edge of an aircraft wing, used primarily to increase lift or drag". Such a flap used in aircraft applications increases lift or drag by creating a local depression behind the flap which is inclined relative to the airflow surface upstream therefrom, which is how the flap of the present invention works, albeit in a different application. Increase of the length or inclination of the flap lowers the pressure seen behind it.

**§102 Claim Rejections**

Claims 1-7, 12-13, 15-19 were rejected as being anticipated by Freeman (US 3,390,837). The Examiner alleges that Freeman shows an "annular flap being inclined towards the outer surface of said forward portion". With respect, this is inaccurate, since the wall surface immediately adjacent the opening 44 is continuous with, and substantially co-planar to, the outer wall surface upstream therefrom, and thus cannot be fairly said to be inclined towards it. Further, this outer wall surface upstream of the wall section immediately adjacent the opening 44 cannot be said to comprise part of a "flap", as this streamlined outer wall surface of the plug cavity is not taught to induce a low pressure region as per the flap of the present invention as claimed. The openings 44 taught by Freeman merely provide flush holes or small openings through which cooling air is permitted to escape, and no teaching provided by Freeman would suggest to one skilled in the art that a depression generating flap structure is to be provided upstream of these openings to induce fluid flow therethrough. Further still, Freeman himself uses the term "flap" to define the flow-directing members 32, which are used to control the engine's thrust-generating exhaust flow, particularly being used to area ration of the exhaust nozzle. Freeman discloses that at subsonic operation there is a net closing force on the flaps 32 because the divergent passage between the plug surface 40 and the inner surface 42 of the flaps 32 results in a low pressure in that area. (col. 3, lines 61-73) As such, it is inappropriate for the Examiner to suggest that one skilled in the art would understand the streamlined plug wall adjacent the vent openings 44 as being flaps, as this contradicts Freeman's own understanding of the term.

Page 7 of 9

Serial No. 10/759,015

Claim 1 of the present invention provides that each flap is "inclined toward the first outer surface such that a zone of local low pressure is induced in the exhaust gas flow downstream of each flap". The inclination allows the flap to effectively perturb the airflow to create this zone of local low pressure. The wall edge depicted by Freeman immediately adjacent the openings 44, having no such inclination since it is continuous with the upstream body wall, would thus be located in the boundary layer of gas flow around the plug 22, and would therefore most likely cause little or no perturbation in the flow hence would fail to create any significant zone of low pressure downstream thereof.

Independent claim 1, as well as claims 2-7 dependent thereon, are thus believed to be patentably distinct from Freeman. Reconsideration of their rejection under 35 USC 102(b) is therefore respectfully requested.

Similarly, claim 12 calls for a step of "inducing a local low pressure in the exhaust flow downstream of the at least one opening, without significantly impeding the flow, by using a flap formed in the centerbody immediately adjacent each of the at least one openings". Freeman clearly fails to teach or suggest at least this element of the present invention. As explained above, the edge of the opening 44 in Freeman would not induce such a local low pressure by using a flap formed in the center body, even if the pressure outside the plug 22 is less than that within the inner cavity thereof. Even if, although it is not specifically disclosed, the characteristics in the structure taught by Freeman would result in cooling air flowing outward through the openings 44, nothing taught by Freeman suggests that a local low pressure region is *induced* using a flap as per the present invention. As such, independent claim 12, and claim 13 dependent thereon, are believed to be patentably distinct from Freeman. Reconsideration of their rejection is respectfully requested.

Also similarly, claim 15 describes "depression means for inducing a local low pressure zone in an exhaust flow flowing along the centerbody", which, as described above, are not present in Freeman. Thus, independent claim 15, as well as claims 16-19 dependent thereon, are believed to be patentably distinct from Freeman. Reconsideration of their rejection is also respectfully requested.

### §103 Claim Rejections

Claims 8-11, 14 and 20 were rejected as being obvious in view of Freeman (US 3,390,837). Claim 8 describes one of many possibilities of a structure to attach the

Serial No. 10/759,015

tailcone, which could be, for example, connected by the rim to the flaps with other structures than vanes, or connected at another point of the tailcone and/or the forward portion, etc. Therefore, one skilled in the art will appreciate that it is simply not true that the using vanes would be the only way that would be practically possible to attach the tailcone's rim and the centerbody flap. In addition, claim 1, on which claim 8 depends, describes a centerbody which is not disclosed by Freeman, as explained above. Thus, applicant submits that the structure described in claim 8 would not have been obvious to one of ordinary skill in the art in view of Freeman.

Claims 9-11, 14 and 20 provide structural details of the present invention which represent more than mere design optimization of the apparatus of Freeman, as alleged. Freeman clearly fails to teach or suggest the subject matter of claims 9-11, 14 and 20, as nothing taught by Freeman would lead one skilled in the art to arrive at the claimed characteristics of the present invention. Regardless, claims 9-11, 14 and 20 are dependent on claims 1, 12 or 15 respectively, which, as explained above, are believed to be patentably distinct from Freeman. Hence, dependent claims 8-11, 14 and 20 are also believed to be patentably distinct from Freeman. Reconsideration of their rejection under 35 USC 103(a) is therefore respectfully requested.

It is submitted, therefore, that claims 1-20 are in condition for allowance.

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Date

Respectfully,

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